**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1.      (Currently Amended) A method comprising:

sending a first message including an aggregation discovery code from a first node to a second node, the second node including a <u>remotely</u> readable and writeable remote discovery register, wherein the first message comprises a capabilities list+request (CLR) message;

receiving a second message at the first node, the second message including the contents of the second node's remote discovery register, the contents of the remote discovery register indicating whether a PHY of the second node has been allocated for aggregation, wherein the second message comprises a CLR message;

comparing a value of the remote discovery register to the aggregation discovery code.

2.      (Canceled).

3.      (Original) The method of claim 1 wherein the sending a first message from a first node to a second node comprises sending a first message from a first node to a customer node.

     4.     (Currently Amended) A method comprising:

receiving a first message including an aggregation discovery code at a second

node from a first node, the second node including a <u>remotely</u> readable and writeable

remote discovery register, the first node comprising a central office node, the second

node comprising a customer node, wherein the first message comprises a capabilities

list+request (CLR) message;

     sending a second message from the second node to the first node in response to

the first message, the second message including the contents of the second node's remote

discovery register, the contents of the remote discovery register indicating whether a

PHY of the second node has been allocated for aggregation, wherein the second message

comprises a CLR message; and

     comparing a value of the remote discovery register to the aggregation discovery

code.


     5.     (Canceled).


     6.     (Currently Amended) A method comprising sending a first message from

a first node to a second node to conditionally set a <u>remotely</u> readable and writeable

remote discovery register of the second node to an aggregation discovery code provided

by the first node if the remote discovery register is clear, the contents of the remote

discovery register indicating whether a PHY at the second node has been allocated for

aggregation, and comparing a value of the remote discovery register to the aggregation

discovery code, wherein the first message comprises a capabilities list (CL) message that

includes an aggregation discovery operation field set to "set if clear" to conditionally set a

remote discovery register of the second node to an aggregation discovery code if the

remote discovery register is clear.

7.      (Previously Presented) The method of claim 6 and further comprising:

receiving a second message at the first node, the second message including an

updated contents of the second node's remote discovery register, wherein the second

message comprises a capabilities list+request (CLR) message.

8.      (Canceled).

9.      (Original) The method of claim 7 and further comprising the second node

determining whether the remote discovery register is clear, and then setting the value of

the remote discovery register to the aggregation discovery code if the remote discovery

register is clear.

10.     (Currently Amended) A method comprising:

receiving a first message at a second node from a first node, the first message

including an aggregation discovery code, the second node including a <u>remotely</u> readable

and writeable remote discovery register, wherein the first message comprises a

capabilities list (CL) message; and

the second node, in response to the first message, determining whether the remote

discovery register is clear, comparing a value of the remote discovery register to the

aggregation discovery code, and then setting the value of the remote discovery register to

the aggregation discovery code if the remote discovery register is clear, the contents of

the remote discovery register indicating whether a PHY at the second node has been

allocated for aggregation.


11.    (Previously Presented) The method of claim 10 wherein the first message

includes an aggregation discovery operation field set to "set if clear," the method further

comprising sending a second message from the second node to the first node, the second

message including an updated contents of the remote discovery register, wherein the

second message comprises a capabilities list+request (CLR) message.


12.    (Canceled).


13.    (Currently Amended) A method comprising sending a first message

including an aggregation discovery code from a first node to a second node and

comparing a value of a <u>remotely</u> readable and writeable remote discovery register of the

second node to the aggregation discovery code to conditionally clear the remote

discovery register of the second node if the value of the remote discovery register

matches the aggregation discovery code provided by the first node, the contents of the

remote discovery register indicating whether a PHY at the second node has been

allocated for aggregation, wherein the first message comprises a capabilities list (CL)

message.

14.    (Previously Presented) The method of claim 13 wherein the first message

includes an aggregation discovery operation field set to "clear if same," the method

further comprising sending a second message from the second node to the first node, the

second message including an updated contents of the remote discovery register, wherein

the second message comprises a capabilities list+request (CLR) message.


15.    (Canceled).


16.    (Currently Amended) A method comprising:

receiving a first message at a second node from a first node, the first message

including an aggregation discovery code, the second node including a remotely readable

and writeable remote discovery register, wherein the first message comprises a

capabilities list (CL) message that includes an aggregation discovery operation field set to

"clear if same.";

comparing a value of the remote discovery register to the aggregation discovery

code; and

clearing the remote discovery register if there is a match between the value of the

remote discovery register and the aggregation discovery code, the value of the remote

discovery register indicating whether a PHY at the second node has been allocated for

aggregation.


17.    (Canceled).

18.    (Currently Amended) An apparatus comprising:

a Media Access Control (MAC);

a PHY coupled to the MAC;

a <u>remotely</u> readable and writeable remote discovery register, a value of the remote discovery register to indicate whether the PHY has been allocated for aggregation; and

a PHY aggregation, the PHY aggregation adapted to perform a read-conditional write upon the remote discovery register to allocate and de-allocate the PHY to PHY aggregation by exchanging capabilities list (CL) and capabilities list+request (CLR) messages;

wherein the PHY aggregation comprises a PHY aggregation adapted to compare the value of the remote discovery register to an aggregation discovery code received from the first node by exchanging CL and CLR messages.

19.    (Original) The apparatus of claim 18, wherein the PHY aggregation comprises a PHY aggregation adapted to determine whether the remote discovery register is clear, and if so, then to set the value of the remote discovery register to an aggregation discovery code received from the first node, in response to a "set if clear" request from the first node.

20.    (Original) The apparatus of claim 18, wherein the PHY aggregation comprises a PHY aggregation adapted to determine whether the value of the remote discovery register matches an aggregation discovery code received from the first node,

and if so, then to clear the remote discovery register, in response to a "clear if same"

request from the first node.


21.      (Original) The apparatus of claim 18, the PHY comprising at least one

from the group comprising:

   a 2BASE-TL PHY; and

   a 10PASS-TS PHY.


22.      (Original) The apparatus of claim 18 wherein the PHY comprises a

plurality of PHYs.


23.      (Original) The apparatus of claim 18 wherein the MAC comprising a

plurality of MACs, and the remote discovery register comprising plurality of remote

discovery registers, each remote discovery register corresponding to a MAC.


24.      (Original) The apparatus of claim 18 and further comprising a processor

coupled to the MAC, a memory and an input/output controller coupled to the processor.


25.      (Original) The apparatus of claim 19 wherein the aggregation discovery

code comprises a Media Access control (MAC) address of the node.


26.      (Original) The apparatus of claim 20 wherein the aggregation discovery

code comprises a Media Access control (MAC) address of the node.

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27. (Original) The apparatus of claim 25 wherein the Media access control

address comprises an Ethernet MAC address.


28. (Original) The apparatus of claim 26 wherein the MAC address comprises

an Ethernet MAC address.


29. (Currently Amended) A method comprising:

performing PHY aggregation discovery, including, in response to a message

received at a second node from a first node, performing a read-conditional write

operation upon a remotely readable and writeable remote discovery register at the second

node to perform at least one of allocate and de-allocate a PHY at the second node to PHY

aggregation, and comparing at the second node whether the value of the remote discovery

register matches an aggregation discovery code received provided by the first node,

wherein performing the read-conditional write operation comprises exchanging

capabilities list (CL) and capabilities list+request (CLR) messages.


30. (Original) The method of claim 29, the method further comprising, in

response to a "set if clear" request from the first node, determining at the second node

whether the remote discovery register is clear, and if so, then to set the value of the

remote discovery register to an aggregation discovery code received from the first node.

31.    (Previously Presented) The method of claim 29, and further comprising, in response to a "clear if same" request from the first node, determining at the second node whether the value of the remote discovery register matches an aggregation discovery code provided by the first node, and if so, then clearing the remote discovery register.


32.    (Currently Amended) A method of PHY aggregation discovery comprising:

exchanging capabilities list (CL) and capabilities list+request (CLR) messages between two nodes to manipulate a remotely readable and writeable remote discovery register at one of the nodes;

said exchanging comprising at least one from the group comprising:

sending a "set if clear" request message including an aggregation discovery code to conditionally set a value of the remote discovery register to the aggregation discovery code; and

sending a "clear if same" request message including an aggregation discovery code to conditionally clear a node's remote discovery register;

wherein the sending the "set if clear" request messages includes comparing a first message including an aggregation discovery code from a first node to a remote discovery register from a second node.


33.    (Original) The method of claim 32 wherein the sending the "set if clear" request message comprises:

sending a first message from a first node to a second node, the first message

having a discovery operation field set to "set if clear", the set if clear message including

an aggregation discovery code, the second node including a remote discovery register;

determining if the remote discovery register is clear;

setting a value of the remote discovery register to the aggregation discovery code

if the remote discovery register is clear.


34.     (Original) The method of claim 33 wherein the sending a first message

from the first node to the second node comprises sending a G.994.1 CL message from a

first node to a second node.


35.     (Original) The method of claim 33 wherein the sending a first message

from the first node to the second node comprises sending a G.994.1 CL message from a

central office node to a customer node.


36.     (Original) The method of claim 32 wherein the sending the "clear if same"

message comprises:

sending a first message from a first node to a second node, the first message

having a discovery operation field set to "clear if same", the first message including an

aggregation discovery code, the second node including a remote discovery register;

comparing the value of the value of the remote discovery register to the

aggregation discovery code;

and clearing the remote discovery register if there is a match between the value of

the remote discovery register and the aggregation discovery code.


37.      (Original) The method of claim 36 wherein the sending a first message

from the first node to the second node comprises sending a G.994.1 CL message from a

first node to a second node.


38.      (Currently Amended) A method comprising:

receiving a message including an aggregation discovery code at a first node from

a second node, the second node including a remotely readable and writeable remote

discovery register, said message including the contents of the second node's remote

discovery register, the contents of the remote discovery register indicating whether a

PHY of the second node has been allocated to aggregation, and comparing a value of the

remote discovery register to the aggregation discovery code, wherein the message

comprises a capabilities list+request (CLR) message.


39.      (Canceled).